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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,952	10/17/2005	Dirk Steinmueller	WITT3004/FJD	2625

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EXAMINER	
BARAN, MARY C	

ART UNIT	PAPER NUMBER
2857	

MAIL DATE	DELIVERY MODE
07/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,952	STEINMUELLER ET AL.	
	Examiner	Art Unit	
	MARY C. BARAN	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The action is responsive to the Amendment filed on 9 April 2008. Claims 16-30 are pending. Claims 18 and 23-26 are amended. Claims 1-15 are cancelled.

2. The amendments filed 9 April 2008 are sufficient to overcome the prior objections to the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites, "a function is specified and used for a particular sensor"; however, it is not clear from the claim language which sensor or sensors are used for the specified function.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Choe (U.S. Patent No. 6,510,397).

Referring to claim 16, Choe teaches a method for monitoring the functioning of sensors (see Choe, column 12 lines 39-41) which measure and monitor the state parameters of liquids or gases (see Choe, column 4 lines 26-30), comprising the steps of:

placing the sensor in a test state at time intervals (see Choe, column 12 lines 43-47 and lines 61-63);

registering test parameters at time intervals or at time intervals during the course of registering measured values (see Choe, column 12 lines 61-63);

storing the registered test parameters (see Choe, column 12 lines 47-50);

evaluating a backward-looking chronological development of the stored test parameters in order to perform functional monitoring (see Choe, column 19 lines 1-65);

predicting from said evaluations the development of sensor behavior to be expected in the future (see Choe, column 7 lines 13-15 and column 14 lines 1-15); and

obtaining thereby information concerning the duration of the remaining disturbance-free operation of the sensor (see Choe, column 14 lines 4-12).

Referring to claim 17, Choe teaches that said evaluation step is conducted using non-linear interpolation methods, in order to obtain a function describing the sensor behavior (see Choe, column 19 line 13 – column 20 line 9).

Referring to claim 18, Choe teaches a function is specified and used for a particular sensor, which reproduces the experience-based sensor behavior (see Choe, column 17 lines 18-35).

Referring to claim 19, Choe teaches that the function involves a polynomial function (see Choe, column 19 lines 18-65).

Referring to claim 20, Choe teaches a first predictive value is determined for the wear limit (see Choe, column 12 lines 39-41).

Referring to claim 21, Choe teaches testing whether the wear limit of the sensor will be reached before the next registering of test parameters (see Choe, column 14 lines 1-12).

Referring to claim 22, Choe teaches testing whether a predictively obtained value of the test parameter lies within a warning range this side of the wear limit as defined at this time (see Choe, column 16 lines 39-43).

Referring to claim 23, Choe teaches determining and issuing and displaying, and where necessary, initiating measures for maintenance on the basis of the information concerning the duration of the remaining, disturbance-free operation (see Choe, column 5 lines 35-40).

Referring to claim 24, Choe teaches determining and, where appropriate, issuing a predictive point in time for replacement of the sensor on the basis of the information concerning the duration of the remaining, disturbance-free operation (see Choe, column 1 lines 12-35).

Referring to claim 25, Choe teaches that as a test parameter, the slope of the sensor signal, or signals, in a particular test state of the sensor is registered and evaluated (see Choe, column 16 line 59 – column 17 line 17).

Referring to claim 26, Choe teaches that as a test parameter, the zero point of the sensor signal, or signals, in a particular test state of the sensor is registered and evaluated (see Choe, column 15 lines 21-33).

Referring to claim 27, Choe teaches that as a test parameter, the internal resistance of an electrode is registered and evaluated (see Choe, column 6 lines 23-26).

Referring to claim 28, Choe teaches that as a test parameter, the change of the dynamic behavior of signals produced by the sensor itself is registered and evaluated (see Choe, column 12 lines 43-47).

Referring to claim 29, Choe teaches a plurality of different test parameters are registered and evaluated (see Choe, column 13 lines 2-31).

Referring to claim 30, Choe teaches obtaining a sensor specific, basic data from a storage arrangement of the sensor or the measured value transmitter over the internet or over update media, for the evaluation (see Choe, column 9 lines 46-60).

Response to Arguments

5. Applicant's arguments filed 9 April 2008 have been fully considered but they are not persuasive.

Applicant argues that Choe does not teach "evaluating a backward-looking chronological development of the stored test parameters in order to perform functional monitoring." However, Applicant's arguments are not well taken. Choe teaches both pre-processing (i.e. backward-looking) the time signals from the sensors, as well as evaluating parameters during a learning time (i.e. backward-looking) and the sensed conditions are accumulated in memory (see Choe, column 19 lines 1-65). Therefore, evaluating a backward-looking chronological development of the stored test parameters in order to perform functional monitoring (see Choe, column 19 lines 1-65).

Applicant further argues that Choe does not teach "predicting from said evaluations the development of sensor behavior to be expected in the future." However, Applicant's arguments are not well taken. Choe teaches using previous determined temperature information to predict various operating conditions (see Choe, column 7 lines 13-15), as well as determining a mean time to failure of a sensor during running time (see Choe, column 14 lines 1-12) and using stored data for statistical trend analysis to determine sensor failure (see Choe, column 14 lines 12-15). Therefore, Choe teaches predicting from said evaluations the development of sensor behavior to be expected in the future (see Choe, column 7 lines 13-15 and column 14 lines 1-15).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY C. BARAN whose telephone number is (571)272-2211. The examiner can normally be reached on Monday to Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary Catherine Baran/
7 July 2008

/Eliseo Ramos-Feliciano/
Supervisory Patent Examiner, Art Unit 2857